

# ECS Bachelor of Computer Science

## Computer Science Department

Département d'Informatique de l'UFR Sciences et Techniques  
3 place Jean Jaurès, F-41000 Blois (FRANCE), Tel : (+33) 2.54.55.21.08

<http://www.info.univ-tours.fr/>

### ECS Program

The first two years described below correspond to the courses that French students must attend before reaching an foreign ECS university during their last year of BSc. In this Year 3, students can choose any of the specialization that are offered by every partner.

#### First Year of ECS Bachelor Degree (L1)

Semester 1	ECTS*	Hours	Semester 2	ECTS*	Hours
Introduction to Computer Science	5	45h	Mathematics	6	65
Fundamentals of Programming	5	46h	Mathematics : algebra	6	65
Mathematics	8	78h	Advanced Programming	4	36
Physics	5	69h	Foreign Language 2	6	44
Methodology	5	16h	Introduction to Automata Theory, Languages, and Computing	3	24
English Language	2	22h	English Language	3	22
			Free Elective Module	2	22

**Total** : 60 ECTS Credits / 552 Total Hours of Training

#### Second Year of ECS Bachelor Degree (L2)

Semester 3	ECTS*	Hours	Semester 4	ECTS*	Hours
Information Systems Modeling	3	24h	Databases (modeling)	4	48h
Algorithmic	5	42h	Databases (querying)	4	42h
Fundamentals of Operating Systems	3	34h	Computer Architecture	4	40h
Object Modeling	4	42h	Introduction to Computer Networks	4	38h
Logic in Computer Science	4	32h	Object-Oriented Programming	4	42h
English Language	3	22h	English Language	3	22h
Oral Communication	3	24h	Management and Accounting	3	24h
Free Elective Module	3	20h	Free Elective Module	3	20h
Software Engineering project	3	18 h			

**Total** : 60 ECTS Credits / 552 Total Hours of Training

It is important to quote that this 2 years program fulfills the needs of a general core program that has been

defined by the ECS partners. Any ECS students must therefore learn the same core knowledge during his/her two first years in his/her local institution.

Here is a brief description of this core program a student must follow during his/her ECS BSc. ETCS requirements are corresponding to the 2 first year and the last year of specialization.

Core module	Total ECTS requirements
Programming techniques	> 20
Software Engineering	> 10
Information Systems	> 5
Computer Networks	> 5
Computer Architecture and Operating Systems	> 10
Mathematics & Computer Science Theory	> 13
Computer Science Applications	> 5
Special scientific topics	< 32
European language & culture, communication,	> 20

### Third Year of ECS Bachelor Degree (L3): specialization in Blois

The table below describes the specialization offered in Blois for foreign incoming ECS students. It consists of subjects among the latest advanced IT and CS skills, including shell and system programming, formal languages, complexity, relational databases, web applications, local area networks and TCP/IP protocols. This year 3 also includes a mandatory 14-weeks industrial placement.

Semester 5	ECTS*	Hours	Semester 6	ECTS*	Hours
Software Engineering Project	3.5	34h	Data security	2	22h
Information System Design	3	24h	Databases	4	44h
Formal Languages and Compilation	4	44h	Databases administration	4	44h
Theory of Complexity and Graph	4	42h	Operating Systems	4	44h
Operating Systems and Shell Programming	3	24h	Software Engineering : modeling	3	24h
Advanced Object-Oriented Programming	3.5	36h	Web Applications	3	34h
Man-Machine Interaction	3	24h	English Language	2	22h
English Language	3	22h	Written Communication	2	22h
Free Elective Module	3	20h	Free Elective Module	3	20h
			Industrial Placement	3	14 weeks

**Total** : 60 ECTS Credits / 552 Total Hours of Training + Industrial Placement of 14 weeks

(\*) **ECTS**, the European Credit Transfer System, was developed by the Commission of the European Communities in order to provide common procedures to guarantee academic recognition of studies abroad. It provides a way of measuring and comparing learning achievements, and transferring them from one institution to another.